US005191645A

United States Patent [19]

Carlucci et al.

[11] Patent Number: 5,191,645

[45] Date of Patent: Mar. 2, 1993

[54] DIGITAL SIGNAL PROCESSING SYSTEM EMPLOYING ICON DISPLAYS

[75] Inventors: **John Carlucci**, Sunnyvale; **Kathlynn Uenaka**, San Jose, both of Calif.

[73] Assignee: **Sony Corporation of America**, Park Ridge, N.J.

[21] Appl. No.: **660,662**

[22] Filed: **Feb. 28, 1991**

[51] **Int. Cl.**[5] **G06F 15/20**

[52] **U.S. Cl.** **395/159**; 395/155; 395/161; 395/139; 340/706; 340/750

[58] **Field of Search** 364/518, 521, 522; 340/706, 747, 750; 395/139, 155, 160, 161, 159

[56] **References Cited**

U.S. PATENT DOCUMENTS

3,610,815	10/1971	Gould et al. .	
3,721,757	3/1973	Ettlinger .	
3,824,336	7/1974	Gould et al. .	
4,538,188	8/1985	Barker et al. .	
4,660,101	4/1987	Martin .	
4,685,003	8/1987	Westland .	
4,717,971	1/1988	Sawyer .	
4,746,994	5/1988	Ettlinger .	
4,763,186	8/1988	Belmares-Sarabia et al. .	
4,862,251	8/1989	Belmares-Sarabia et al. .	
4,866,511	9/1989	Belmares-Sarabia et al. .	
4,945,498	7/1990	Mitamura	364/521
4,970,664	11/1990	Kaiser et al.	364/521
4,998,165	3/1991	Lindstrom	358/81
5,001,696	3/1991	Baldwin	364/521

FOREIGN PATENT DOCUMENTS

2247597	3/1992	United Kingdom .

OTHER PUBLICATIONS

Conversation with Larry Seehorn, "The Midas Touch", Videography journal, May 1989, pp. 78–81.

Seehorn Technologies Inc., "Midas I", one-page brochure, undated.

Seehorn Technologies Inc., "Midas II", nine-page brochure, Oct. 1988.

"CMX 6000 Random-Access Editing System", five-page brochure, Mar. 1987.

"Editdroid—The Editing System of Choice", six-page brochure, 1985.

"E-Pix Hybrid Editing System", four-page brochure, undated.

David Hughes, "EMC²: The New Editing Equation at Henninger Video", Videography Journal, p. 68.

"The Link Editing System", seven-page brochure, Oct. 1988.

"AVID/1 Media Composer—Product Description", two-page brochure, Apr. 1989.

"Montage Picture Processor—Product Specifications," four-page brochure, undated.

Pinnacle Systems, Inc., four-page brochure, undated.

Primary Examiner—Gary V. Harkcom
Assistant Examiner—Phu K. Nguyen
Attorney, Agent, or Firm—Limbach & Limbach

[57] **ABSTRACT**

A method and system for generating icon displays representing digitized film scenes and scene processing operations, and manipulating the icon displays to initiate selected processing operations (such as transfers from one storage location to another) on the scenes. The invention can be embodied in a film scanning system having circuitry for digitizing scanned film images, for digitally correcting the digitized scanned images, and for inserting video sync information into the corrected images to convert the corrected images into a video signal. The system is also capable of inserting digital data in such a video signal, such as film in and out points, and data identifying a video storage location, and then storing the resulting video signal as a video format scene. In addition to generating a scene from a sequence of digitized film frames and related digital data, the system of the invention generates an icon representing the scene by compressing a selected one of the frames in the sequence. In response to a user command for information regarding a scene, the system displays the compressed scene image and other relevant scene data. The system also displays scene processing icons. In response to user selection of a scene icon and a scene processing icon, the system executes the corresponding processing operation on the corresponding scene.

34 Claims, 11 Drawing Sheets